May 31, 2011 Water Supply Forecast Discussion

This forecast includes observed conditions through the morning of May 31, 2011 and is posted: http://cdec.water.ca.gov/cgi-progs/iodir?s=b120up.

Forecast Summary:
The projected median April-July runoff now ranges from 143 percent (Shasta Lake, Total Inflow and the Sacramento River above Bend Bridge) to 191 percent (Kern River). All forecasts rose or remained the same compared to last week's forecast. Statewide, the forecast increased about three percent. From a regional perspective, the largest gains were in the northern Sierra where the Sacramento River above Bend Bridge, Feather River, and Yuba River forecasts rose 4, 5, and 4 percent, respectively.

Runoff:
For all forecasted rivers, the flow rate for May was greater than 110 percent of average. The Tuolumne River flowed at the lowest rate, about 115 percent of normal, and the Kern River flowed at the highest rate of about 160 percent of normal. There is not a noticeable correlation between the basin elevation and the percent of average May runoff.

Precipitation:
During May, the Northern Sierra 8-Station Index rose 4.6 inches which is almost 220 percent of average. The seasonal total through May is 69.0 inches, which is 145 percent of average-to-date and 138 percent of an average water year.

During May, the San Joaquin 5-Station Index rose 3.6 inches which is 200 percent of average. The seasonal total is 61.3 inches, which is nearly 160 percent of average-to-date and 150 percent of an average water year.

The topic of variability, which was mentioned in an earlier email, is still a characteristic of Water Year 2011. For both indexes, April was well below average and May was at least 200 percent of average.

Snowpack:
According to snow sensor data for the morning of May 31, statewide snowpack is 28 inches (99 percent of the April 1 average and 309 percent of average-to-date). During May, the statewide percent of normal increased from 190 to 309 percent. The increase indicates that the reduction in the snowpack during May was slower than normal. Regionally, the Northern Sierra, Central Sierra, and Southern Sierra snowpack are 107, 105, and 71 percent of their respective regional April 1 average.

Weather and Climate Outlooks:
The weather forecast for the next six days over the Northern Sierra indicates precipitation Friday through Monday. The accumulation during these three days is expected to be about an inch or less. When the precipitation begins, the freezing levels will be in the range of 8000-9500 feet. Then, by Tuesday, these levels will increase to 10000-11000 feet.

Over the central and southern Sierra, the precipitation is not expected until Saturday. The accumulation on Saturday and Sunday is expected to be less than one half inch. When the precipitation falls on these regions, freezing levels will be from 9500 to 11000 feet. By Tuesday, the levels will increase to 10500 to 11500 feet.

The Climate Prediction Center's (CPC) six to ten day outlook (6/7/11-6/11/11) continues to indicate an increased chance of below normal temperatures over all of California. During this same period, there is an equal chance of above or below normal precipitation.

The CPC's one-month outlook for June, updated on May 31, suggests increased chances of below normal temperatures for all of California except the southern fifth of the state. During the same period, there is an increased chance of above normal precipitation over the northern two thirds of the state.

The CPC's three-month outlook (June-August, updated May 19) suggests increased chances of above normal temperatures for the Sierra Nevada and the Colorado River region. For all other regions including most of the Shasta-Trinity region, equal chances of above or below normal temperatures are forecast. The same outlook suggests increased chances of below normal precipitation for the far northwest region of the State. For all other areas of the State, this outlook calls for equal chances of above or below normal precipitation.

Next Update:
The next Bulletin 120 Forecast update will be produced for conditions on June 7, 2011, and will be available by Thursday, June 9, 2011. If you need guidance before then, or have any questions, please contact us:

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Important Links
Full Natural Flow Data:
Daily FNF
http://cdec.water.ca.gov/cgi-progs/snowsurvey_ro/FNF
Monthly FNF
http://cdec.water.ca.gov/cgi-progs/snowsurvey_ro/FNFSUM
Seasonal FNF
http://cdec.water.ca.gov/cgi-progs/snowsurvey_ro/FLOWOUT

Precipitation Data:
Northern Sierra 8-Station Precipitation Tabulation Table
http://cdec.water.ca.gov/cgi-progs/products/8-Stations_Tab.pdf
San Joaquin 5-Station Precipitation Tabulation Table
http://cdec.water.ca.gov/cgi-progs/products/5-Stations_Tab.pdf
2011 WY Precipitation Summary
http://cdec.water.ca.gov/cgi-progs/precip/PRECIPSUM

Snow Data:
Latest Snow Sensor Report
http://cdec.water.ca.gov/cgi-progs/snow/PAGE6

Latest Statewide Summary of Snow Water Equivalents
http://cdec.water.ca.gov/cgi-progs/snow/DLYSWEQ
Monthly Snow Course Report
http://cdec.water.ca.gov/cgi-progs/snow/COURSES

California Nevada River Forecast Center Snow Melt Guidance Products:
Snow Data and Spring Seasonal Runoff Forecasts
http://www.cnrfc.noaa.gov/snowmelt.php
20-Day Snowmelt Guidance (Raw Model Output)
http://www.cnrfc.noaa.gov/awipsProducts/RNOHFSESP.php
Peak 1-Day Stream flow Volume and Date Forecast
http://www.cnrfc.noaa.gov/awipsProducts/RNOHFSSPK.php

Extended Regional Forecasts:
California Nevada River Forecast Center 6 Day QPF and Snow Level Forecast
http://www.cnrfc.noaa.gov/awipsProducts/RNOHD6RSA.php
Climate Prediction Center 6-10 Day Outlook Forecasts
http://www.cpc.ncep.noaa.gov/products/predictions/610day/
Climate Prediction Center One-Month Outlook Forecasts
http://www.cpc.noaa.gov/products/predictions/30day/
Climate Prediction Center Three-Month Outlook Forecasts
http://www.cpc.noaa.gov/products/predictions/90day/